

**The invention claimed is:**

- 1 1. A communication method, comprising the steps of:  
2 encoding a pilot signal using a plurality of codes to produce a plurality of encoded pilot  
3 signals, the plurality of codes having at least a first and a second code where each of the plurality  
4 of codes are different, and the plurality of encoded pilot signals having at least a first and a  
5 second encoded pilot signal; and  
6 transmitting each of the plurality of encoded pilot signals on a different antenna.
- 1 2. The method of claim 1, wherein the plurality of encoded pilot signals are transmitted  
2 substantially simultaneously.
- 1 3. The method of claim 1, wherein the plurality of codes are orthogonal.
- 1 4. The method of claim 3, wherein the plurality of codes are Walsh codes.
- 1 5. The method of claim 3, wherein the plurality of encoded pilot signals are transmitted  
2 substantially simultaneously.
- 1 6. A communication method, comprising the steps of:  
2 encoding a pilot signal using a first code to produce a first encoded pilot signal;  
3 encoding the pilot signal using a second code to produce a second encoded pilot signal,  
4 where the first and second codes are different; and  
5 transmitting the first and second encoded pilot signals on different antennas.
- 1 7. The method of claim 6, wherein the first and second encoded pilot signals are  
2 transmitted substantially simultaneously.
- 1 8. The method of claim 6, wherein the first and second codes are orthogonal.
- 1 9. The method of claim 8, wherein the first and second codes are Walsh codes.
- 1 10. The method of claim 8, wherein the first and second encoded pilot signals are  
2 transmitted substantially simultaneously.

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1 11. A communication method, comprising the steps of:  
2 encoding a carrier signal using a plurality of codes to produce a plurality of encoded  
3 carrier signals, the plurality of codes having at least a first and a second code where each of the  
4 plurality of codes are different, and the plurality of encoded carrier signals having at least a first  
5 and a second encoded carrier signal; and  
6 transmitting each of the plurality of encoded carrier signals on a different antenna.

1 12. The method of claim 11, wherein the plurality of encoded carrier signals are  
2 transmitted substantially simultaneously.

1 13. The method of claim 11, wherein the plurality of codes are orthogonal.

1 14. The method of claim 13, wherein the plurality of codes are Walsh codes.

1 15. The method of claim 13, wherein the plurality of encoded carrier signals are  
2 transmitted substantially simultaneously.

1 16. A communication method, comprising the steps of:  
2 encoding a carrier signal using a first code to produce a first encoded carrier signal;  
3 encoding the carrier signal using a second code to produce a second encoded carrier  
4 signal, where the first and second codes are different; and  
5 transmitting the first and second encoded carrier signals on different antennas.

1 17. The method of claim 16, wherein the first and second encoded carrier signals are  
2 transmitted substantially simultaneously.

1 18. The method of claim 16, wherein the first and second codes are orthogonal.

1 19. The method of claim 18, wherein the first and second codes are Walsh codes.

1 20. The method of claim 18, wherein the first and second encoded carrier signals are  
2 transmitted substantially simultaneously.